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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,631	09/08/2003	Daniel Robert Olson	124366 (1306-13)	9446

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EXAMINER	
ANGEBRANNDT, MARTIN J	
ART UNIT	**PAPER NUMBER**
1756	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/657,631	OLSON ET AL.	
	Examiner	Art Unit	
	Martin J. Angebranndt	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/8/03,12/12/03 & 1/7/04*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/12/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-25 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims language of claims 1, 24 and 25 describing the barrier layer as "between the reactive layer and the laser incident surface" is flawed as the barrier layer **is** the incident surface of the light in some of the embodiments. The applicant should amend the claims to describe the barrier layer as being provided on the outer surface of the second substrate (as in figures 6-8) or between the second substrate and the reflective layer (as in figures 9-15).

Also the data storage layer should describe the data layer being on the side of the reflective layer opposite that of the first substrate (otherwise the readout prevention does not prevent readout of information in the data layer, since it would be read through the first substrate, not the same (the reflective layer is opaque)). This language would not cover data embossed into the substrate.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1,2,4-7,11-27 and 29-32 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Ezbainsky et al. '892.

Example 15 describes PMMA/leuco methylene blue solutions described in examples 14 (which referes to example 1) applied to aluminized polycarbonate substrate, which are then coated with Daicure SD698, which is a UV curable adhesive, and a polycarbonate disc and then cured using a UV light. The decrease in reflectivity over time is shown in figures 3 and 4, where the reflectivity is initially above 60% for the deaerated samples and declines over time to about 15%. [0136-0139]. The use of various specific polycarbonate materials is described in sections [0025-0038]. The use of various data layers is disclosed. [0051]. The use of various adhesive materials including acrylates, silicon hardcoats and non-acrylic materials is disclosed. [0103-0104]. The use of various substrate materials is disclosed. [0028-0045]. The provision of protective layers on either side of the data layer, such as nitrides, oxides and oxynitrides is disclosed. [0053]. The composition of the reactive layer is described and include percentages of the various components [0055-0077].

The examiner holds that UV cured coatings inherently have some oxygen permeability and cites Larson et al., "Properties of radiation cured coatings", Intern. J. Rad Appl. Instrum. Part

C, Rad. Phys & Chem. Vol. 30(1) pp. 11-15 and Sax et al., "Permeabilities of radiation cured marterials", Intern. J. Rad Appl. Instrum. Part C, Rad. Phys & Chem. Vol. 31(4-6) pp. 887-896.

6. Claims 1,2,4-7,11-27 and 29-32 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Ezbainsky et al. '323.

Example 15 describes PMMA/leuco methylene blue solutions described in examples 14 (which referes to example 1) applied to aluminized polycarbonate substrate, which are then coated with Daicure SD698, which is a UV curable adhesive, and a polycarbonate disc and then cured using a UV light. The decrease in reflectivity over time is shown in figures 3 and 4, where the reflectivity is initially above 60% for the deaerated samples and declines over time to about 15%. [0136-0139]. The use of various specific polycarbonate materials is described in sections [0025-0038]. The use of various data layers is disclosed. [0051]. The use of various adhesive materials including acrylates, silicon hardcoats and non-acrylic materials is disclosed. [0103-0104]. The use of various substrate materials is disclosed. [0028-0045]. The provision of protective layers on either side of the data layer, such as nitrides, oxides and oxynitrides is disclosed. [0053]. The composition of the reactive layer is described and include percentages of the various components [0055-0077].

7. Claims 1,2,4-7,11-27 and 29-32 are rejected under 35 U.S.C. 102(e) as being fully anticipated by van de Grampel et al. '501.

See the embodiment of figure 3,where the adhesive layer is atop the reactive layer. Se example 6 which describes PMMA/leuco methylene blue solutions described in examples 14 (which referes to example 1) applied to aluminized polycarbonate substrate, which are then coated with a UV curable acrylate (Daicure SD698), and a polycarbonate disc and then cured

using a UV light. The decrease in reflectivity over time is discussed. The use of various substrate materials is described (3/1-6/22). The use of various adhesive materials including acrylates, silicon hardcoats and non-acrylic materials is disclosed. (7/41-8/8). The composition of the reactive layer is described and include percentages of the various components [0055-0077].

8. Claims 1,2 and 4-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ezbainsky et al. '892, van de Grampel et al. '501 or Ezbainsky et al. '323

It would have been obvious to one skilled in the art to use other substrate materials, other adhesive materials and/or other binders in the reactive layer disclosed as useful in place of those used in the examples with a reasonable expectation of forming a useful optical recording medium protected by a limited readout mechanism.

9. Claims 1,2,4-7,11-27 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. JP 60-127542, in view of Smith et al. '484.

Murakami et al. JP 60-127542 teaches optical recording media which are read through the substrate, which comprise a PMMA substrate, a UV curing resin which provides the pregrooves, a Te-O reflective recording film and a protective resin layer (abstract and figures 1 and 2.

Smith et al '484 teaches optical recording media according to figure figures 6a-7b which have copy prevention means between the substrate and a reflective layer. These are read through the substrate. The copy prevention layer may contain compounds which are reactive with oxygen/air and include methylene blue, brilliant cresyl blue, basic blue 3 and toluidine blue O (10/17-13/32 and 8/66-9/35)

It would have been obvious to one skilled in the art to modify the invention of Murakami et al. JP 60-127542 by adding the reactive layer of Smith et al. '484 between the substrate and the reflective TeO layer with a reasonable expectation of extending the protection to this recording medium.

10. Claims 1,2,4-7,11-27 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. JP 60-127542, in view of Smith et al. '484, further in view of Breitung et al. WO 02/075733.

Breitung et al. WO 02/075733 teach the provision of a reactive layer including methylene blue which reacts with oxygen to oxidize and form an opaque or semiopaque layer (pages 3-4). This reactive layer is placed on outside of substrates of optical recording media, which are read through the substrate and is overcoated with a UV curable protective coating. (page 14). The UV protective coating controls the rate of coloration, which is much slower than without a protective overcoating. (page 14,7-21, figure 4). The provision of the recording layer (9) between the reflective layer (7) and the substrate (5) and the accessing of the recording medium from the side which the reactive layer is formed on is shown in figure 2. The use of dielectric layers about the recording layer is disclosed. (page 11). The reactive layer compositions are disclosed. on page 11- 14.

It would have been obvious to modify the inventions resulting from the combination of Murakami et al. JP 60-127542, and Smith et al. '484 by adding a recording layer adjacent the reflective layer in a manner similar to that of Breitung et al. WO 02/075733, using the barrier layer materials and/or using the reactive layers of Breitung et al. WO 02/075733 with a reasonable expectation of forming a useful optical recording medium with a reduced rate of

colorization compared to the embodiment of figures 3a and 3b of Smith et al. '484 where the reactive layer is outermost based upon the teachings of Breitung et al. WO 02/075733 concerning the function of the overcoat and the disclosure by Smith et al. '484 concerning oxygen permeation of the substrate.

11. Claims 1 and 3-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. '484, in view of Akiyama et al. JP 60-261046 or Akiyama et al. JP 60-256944

Akiyama et al. JP 60-261046 teach encapsulation of optical recording media in UV curable coatings to provide additional protection with an even coating.

Akiyama et al. JP 60-256944 teach encapsulation of optical recording media in UV curable coatings to provide additional protection with an even coating.

It would have been obvious to one skilled in the art to modify the invention of Smith et al. '484 by providing additional protection over the entire medium to prevent damage and prevent moisture intrusion along the edges.

12. Claims 1 and 3-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. '484, in view of Akiyama et al. JP 60-261046 or Akiyama et al. JP 60-256944, further in view of Breitung et al. WO 02/075733

It would have been obvious to modify the inventions resulting from the combination of Smith et al. '484 with Akiyama et al. JP 60-261046 or Akiyama et al. JP 60-256944 by adding a recording layer adjacent the reflective layer in a manner similar to that of Breitung et al. WO 02/075733, using the barrier layer materials and/or using the reactive layers of Breitung et al. WO 02/075733 with a reasonable expectation of forming a useful optical recording medium with a reduced rate of colorization compared to the embodiment of figures 3a and 3b of Smith et al.

'484 where the reactive layer is outermost based upon the teachings of Breitung et al. WO 02/075733 concerning the function of the overcoat and the disclosure by Smith et al. '484 concerning oxygen permeation of the substrate.

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 1,2 and 4-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-39 of U.S. Patent No. 6790501. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims overlap in the case where the adhesive layer acts as a barrier layer to the migration of oxygen to the reactive layer.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Martin J Angebranndt
Primary Examiner
Art Unit 1756

03/31/2006